



*THE INSTITUTE FOR
INTERCONNECTING
AND PACKAGING
ELECTRONIC CIRCUITS*

IPC-D-352

Electronic Design Data
Description for Printed
Boards in Digital Form

IPC-D-352

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Electronic Design Data Description for Printed Boards

1.0 SCOPE

The information contained in this standard is intended to describe the relationship between the elements used in the electromechanical design and packaging of electronic products using printed boards as the major form of interconnection. Included in these descriptions are the logical and physical elements necessary as input to a design system, as well as the network or interconnection description between the various electronic parts. It is further intended that this structure provides the capability for describing all elements in their final form upon design completion.

The logical and physical elements used in the electronic design process shall be described in digital form in order to enable the data exchange and archiving capability between systems which support design, manufacture, assembly, and test.

1.1 Format Compatibility The concepts detailed in this standard are supplemented by the descriptions defined in other companion IPC standards. It is the intent that the family of IPC-D-35X standards detail the various record formats.

Data redundancy is kept to a minimum by using various standards for appropriate data descriptions dependent upon the use of the data.

The following shows the correlation between the IPC standard and the record formats that are defined in each particular standard.

IPC-D-35X

Standards Record Description

IPC-D-350	Artwork Records
IPC-D-350	Board Description Records
IPC-D-351	Schematic Drawing Records
IPC-D-351	Master Drawing Records
IPC-D-351	Assembly Drawing Records
IPC-D-351	Miscellaneous Part Drawing Records
IPC-D-352	Electrical Description Records
IPC-D-352	Bill of Material Records
IPC-D-353	Testing Format Records
IPC-D-354	Library Description Records

The electronic design description for a single design may contain different information at various points in the design cycle. Initially, board description records may contain only

board outline and blocked area information; part description information in either library records or miscellaneous part drawing records; electrical description records describe the electrical associativity of the parts.

Once a design is completed, board description records are supplemented with conductor routing information, hole information, and other data necessary to fabricate printed wiring boards. The data base can be added to as necessary in order to provide reference designator information for schematic drawing records, or any other data necessary for the intent of the user's data base.

Users are encouraged to maintain data in a form that is self-sufficient, and is not impacted by changes in supplementary data used in the design process. Thus, library description records may be repeated on archived data. All records shall be in the appropriate format defined in the IPC standard related to the particular record type.

2.0 APPLICABLE DOCUMENTS

The following documents, of the issue currently in effect, form a part of this standard to the extent specified herein.

2.1 IPC¹

IPC-T-50 Terms and Definitions

IPC-D-300 Printed Board Dimensions and Tolerances

IPC-D-310 Suggested Guidelines for Artwork Generation and Measurement Techniques for Printed Circuits

IPC-D-325 Printed Board Documentation

IPC-D-350 Printed Board Description in Digital Form

IPC-D-351 Printed Board Drawings in Digital Form

IPC-D-353 Automatic Test Information Description in Digital Form

IPC-D-354 Library Format Description for Printed Board Digital Data Bases

2.2 American National Standards Institute²

ANSI X3/TR-1-77 American National Dictionary for Information Processing

ANSI X3.12 Subroutine Record Format Standardization

1. Publications are available from the IPC, 2215 Sanders Road, Northbrook, IL, 60062-6135

2. To obtain documents, write: American National Standards Institute, 1430 Broadway, New York, NY 10018